UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

TAILORED LIGHTING, INC.,

Plaintiff,

v.

OSRAM SYLVANIA PRODUCTS, INC.,

Defendant.

MEMORANDUM OF LAW

Civil Action No. 04-CV-6435 MAT

Defendant Osram Sylvania Products, Inc. submits this Memorandum of Law in support of its Motion for Summary Judgment of Non-Infringement and Invalidity of U.S. Patent No. 5,666,017 issued to Kevin P. McGuire and assigned to Plaintiff Tailored Lighting Inc.

Pursuant to Local Rule 56.1, a separate, concise statement of the material facts as to which Sylvania contends there is no genuine issue to be tried accompanies this Motion.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

I. INTRODUCTION

Plaintiff Tailored Lighting Inc. ("TLI") brought the above-captioned action against Defendant Osram Sylvania Products, Inc. ("Sylvania") alleging that thirty different Sylvania automotive lighting products ("the accused lamps")[1] infringe TLI's patent for a "Daylight Lamp," U.S. Patent No. 5,666,017 ("the '017 patent," a copy of which is attached hereto as **Ex. A**). Sylvania is entitled to summary judgment for three reasons, all of which relate to the formula recited in claim 1 of the '017 patent. First, TLI did not produce any credible evidence of infringement by any of the thirty accused lamps with respect to the formula and, therefore, as a matter of law, TLI cannot prove infringement. It is not surprising that TLI failed to apply the formula properly to any of the accused lamps because the '017 patent does not enable one of skill in the art to make a lamp having a coating in accordance with the formula and, thus, as a second reason, the disclosure of the '017 patent fails to meet the enablement requirements of 35 U.S.C. § 112. Finally, to the extent TLI argues that the formula can be simplified for absorption filters or is inherently met for all coated daylight lamps, these unsupported premises, if true, render the '017 patent invalid under 35 U.S.C. § 102 because the prior art discloses all other elements of claim 1 in operative combination - - the lamp, the envelope, the filament and the coating combined to produce daylight.

---

[1] **Docket No. 1**, TLI's Complaint, at ¶ 12-24. TLI's Complaint specifically alleges that Sylvania's SILVERSTAR product models H1ST, H3ST, H4ST, H7ST, 880ST, 893ST, 9004ST, 9003ST, H4651ST, H4656ST, H4666ST, H6024ST, H6054ST, 9005ST, 9006ST, 9006XSST, and 9007ST and COOL BLUE product models H7CB, 9003CB, H4651CB, H4656CB, H4666CB, H6024CB, H6054CB, 9004CB, 9005CB, 9005XSCB, 9006CB, 9006XSCB, and 9007CB infringe at least claim 1 of the '017 patent. *Id.* at 12, 19. SILVERSTAR model 1156ST was also included in the Complaint, but later withdrawn by Order of the Court, dated October 6, 2005. **Docket No. 66**, p. 6.

II. ARGUMENT

A. SUMMARY OF THE ARGUMENT

Claim 1[2] recites "a lamp for producing a spectral light distribution substantially identical in uniformity to the spectral light distribution of a desired daylight." Daylight lamps were not new as of February 27, 1996, the '017 patent's filing date. Providing artificial light the same color as daylight by using an intervening coated glass filter has been well known since at least 1864, *see, e.g.*, U.S. Patent No. 43,581 to Gillet[3], and in the subsequent 130 years prior to the 1996 filing of TLI's patent application, an extensive volume of prior art has disclosed tinted and coated lamps that produce daylight.[4] In the 1920's, for example, Tung-Sol Lamp Works Inc. of Newark, NJ sold in the United States a blue-tinted automotive headlamp that produced "daylight confidence."[5] Given the significant prior art in the crowded field of daylight lamps, we must look closely at claim 1 to ascertain what, if anything, claimed was actually new as of its filing date.[6]

Claim 1 recites a lamp having an enclosed lamp envelope, and that was not new. Claim 1 further recites a light producing element centrally disposed within the lamp (which this Court has construed to mean "at or near the center of the lamp envelope"), and that was a feature of practically every lamp and, thus, not new. Claim 1 further recites a coating, which lamps had long prior to the patent's February 27, 1996 filing date. What is apparently alleged to be "new"

---

[2] For the Court's convenience, attached hereto as **Ex. 1** is an annotated copy of claim 1 of the '017 patent. The formula that is central to this argument appears in the fourth element of the claim.

[3] *See* **Ex. Q**, discussed in more detail at Section II.F., *infra*.

[4] Functionally, a tinted bulb filters light the same as a coated bulb. *See, e.g.*, **Ex. R**, U.S. Patent No. 1,765,242 to Reiter, at p.1, ln. 5-9 (discussed in more detail in Section II.F., *infra*).

[5] Advertisements for the Tung-Sol Lamps are attached hereto as **Ex. B and Ex. C**.

[6] To obtain a valid patent, the invention must be "new and useful." 35 U.S.C. § 101.

is the formula recited in the fourth element of the claim, requiring the lamp to have "at least one coating ... having a transmittance level in substantial accordance with the *formula*" of claim 1. (emphasis added). The patent merely dresses up an old combination - - an envelope, a substantially centrally disposed filament and a coating combined to produce daylight - - with an allegedly new formula. However, this formula raises three significant problems that TLI cannot overcome and that entitle Sylvania to summary judgment.

First, on this record, TLI cannot prove infringement because TLI has produced no credible evidence that any of the accused Sylvania lamps satisfies the formula. To prove infringement, either literally or under the doctrine of equivalents, TLI must show that each of the thirty accused lamps contains each element of claim 1, and that requires TLI to use the formula recited in claim 1 to demonstrate infringement. To date TLI has produced no evidence that it applied the formula, a claim element, to twenty-seven (27) of the thirty (30) accused lamps. As to the remaining three accused lamps, TLI did not apply the formula correctly because it merely inserted assumed values for the variables in the formula to reach a pre-ordained result, but TLI had no scientifically recognized basis that demonstrates the arbitrarily assumed values for the three accused lamps were actually correct values.[7] Summary judgment of non-infringement is appropriate.

Second, Sylvania is entitled to summary judgment of invalidity because the '017 patent does not provide sufficient disclosure to enable one of skill in art to make a lamp having a coating in accordance with the formula because the formula contains at least two *unknowable*

[7] The formula set forth in claim 1 of the '017 patent has no scientific provenance. The '017 patent contains no discussion about the origin of the formula, there is no peer review validation for the formula, and there is no discussion of the formula in any scientific journals following the issuance of the '017 patent. Thus, there is no scientific basis for TLI's unverified assumptions about the values for the variables in the formula.

variables and too many unknown variables. One of skill in the art cannot determine values for the N and S*(*l*) variables of the formula and, as a result, cannot use the formula to calculate a transmission T(*l*) for the envelope coating. This failure explains why TLI did not correctly apply the formula to the three accused lamps and made no attempt to apply the formula to the other 27 accused lamps.

Third, TLI's justification for its failure to apply the formula supports summary judgment of invalidity over the prior art. TLI and its expert, Dr. Mark D. Fairchild, posit either that the formula is simplified in the case of absorption filters or that all coated daylight lamps inherently meet the formula. These unsupported premises, if true, render the '017 patent invalid over prior art that discloses all other elements of claim 1 in operative combination: the lamp, the envelope, the substantially centrally disposed filament and the coating to produce daylight.

B. ANALYTICAL FRAMEWORK

A party is entitled to summary judgment when there is no "genuine issue of material fact" and the undisputed facts warrant judgment for the moving party as a matter of law. Fed. R. Civ. P. 56 (c). Summary judgment is appropriate in a patent infringement case where the court, drawing all reasonable inferences in favor of the patentee, concludes that no reasonable jury could find infringement. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n. 8 (1997).

Determining whether a product infringes another's patent is a two step process. First, the Court must construe the claims to determine their scope and meaning.[8] Second, the Court must compare the allegedly infringing product against the claims as construed to determine whether

[8] On September 24, 2007, the Court issued a Decision and Order on the construction of claim 1 of the '017 patent, hereinafter referred to as "Decision and Order." **(Docket No. 108)**.

the accused product embodies *every* limitation of the claims. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*). A party moving for summary judgment of non-infringement (an issue on which the nonmovant bears the burden of proof) does not need to prove non-infringement, but can show "that the patentee had no evidence of infringement and point [ ] to the specific ways in which the accused systems did not meet the claim limitations." *Exigent Tech., Inc. v. Atrana Solutions, Inc.*, 442 F.3d 1301, 1308-09 (Fed. Cir. 2006). The burden then shifts to the patentee. *Id.* at 1309.

To prove infringement of the asserted claims, TLI must show that *each* of the accused lamps meets *all* of the elements of claim 1, either literally or under the doctrine of equivalents. *Warner-Jenkinson*, 520 U.S. at 29. No structural or functional limitation in the claim may be ignored. *Id.* "Each element contained in a patent claim is deemed material to defining the scope of the patented invention." *Id.* at 19.

Further, the scope of the '017 patent must be given the same interpretation when being analyzed for validity or infringement. *Amazon.com, Inc., v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001)("A patent may not, like a 'nose of wax,' be twisted one way to avoid anticipation and another to find infringement.") (citing *White v. Dunbar*, 119 U.S. 47 (1886)). "It is established law that that which infringes, if later, anticipates if earlier." *Lisle Corp. v. A.J. Mfg. Co.*, 398 F.3d 1306, 1315 (Fed. Cir. 2005).

Although a patent claim is presumed to be valid, it is invalid if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). A claim is also invalid under 35 U.S.C. § 103 if the claim is obvious in view of the prior art. *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

C. THE ACCUSED LAMPS

The accused lamps are halogen lighting products that Sylvania designed as replacement headlamps for automobiles to compete in the aftermarket automotive lighting market with other halogen headlamps and high intensity discharge (HID) headlamps. (**Docket No. 1**, TLI's Complaint, at Ex. D; **Ex. D**, Callahan dep., p. 88, ln. 15-21; **Ex. E**, Peach dep., p. 27, ln. 21 - p. 28, ln. 5; p. 39, ln. 18-24; and p. 48, ln. 3-15). The advent of HID headlights has created a commercial demand for halogen lamps that simulate the look and performance of HID headlamps by providing whiter (less yellow) road lighting. (**Ex. F**, May 2, 2000 RPI Lighting Research Center Report, *Visual Benefits of CoolBlue Lamps*).

Sylvania developed the accused lamps to simulate the look of HID headlamps, but at a much lower cost to the consumer. (**Ex. D**, Callahan dep., p. 41, ln. 12-14 and p. 88, ln. 15-21; **Ex. E**, Peach dep., p. 27, ln. 21 - p. 28, ln. 5; p. 39, ln. 18-24; and p. 48, ln. 3-15). To create a whiter color, Sylvania did exactly what the prior art taught, coating the lamp envelope with a blue filter.[9] (**Ex. D**, Callahan Dep. p. 37, ln. 14 - p. 45, ln. 23). As has been recognized in the art for over 100 years, adding a blue filter or coating to a conventional lamp will give it a color which is "closer to daylight" then the unfiltered lamp.[10] As reflected in Sylvania's advertising for the accused products, the target color temperature for the accused Cool Blue products is 3500K, while the target color temperature for the accused SilverStar products is 4000K. (**Docket No. 1**, TLI's Complaint, at Ex. D).

---

[9] *See, e.g.*, U.S. Patent No. 1,765,242 to Reiter, discussed in Section II. F., *infra*, which teaches that blue-tinted incandescent lamps, with either a colored glass envelope or a coated envelope, have been utilized to obtain daylight illumination. **Ex. R**, p.1, ln. 1-16.

[10] *See, e.g.*, U.S. Patent No. 43,581 to Gillet, discussed in Section II. F, *infra*. **Ex. Q**, col. 1, ln. 22-28 and col. 2, ln. 18-27. Sylvania's advertising for the accused lamps does not assert that such lamps produce a daylight spectrum, but merely states the lamp is "closer to daylight" than a standard halogen lamp. *See* **Docket No. 1**, TLI's Complaint, at Ex. B.

D. SYLVANIA IS ENTITLED TO SUMMARY JUDGMENT OF NON-INFRINGEMENT BECAUSE TLI HAS NOT PRODUCED ANY CREDIBLE EVIDENCE THAT ANY OF THE ACCUSED LAMPS SATISFY THE FORMULA OF CLAIM 1

In its September 24, 2007 Decision and Order on claim construction, the Court found that the term "and having a transmittance level in substantial accordance with the formula" that appears in the fourth element of claim 1 requires that:

> [the] coating of the bulb transmit light energy that is in substantial accordance *with the stated formula*. The mathematical formula recited in the claim discloses a standard for transmittance that the bulb seeks to attain. The patent does not require that the light emitted from the bulb conform exactly to that standard, but instead, teaches that the light transmitted will be adequate as long as it is *in 'substantial accordance' with the standard defined by the formula*.

Decision and Order at 22-23 (emphasis added). And it is clear from the Court's claim construction that the values for each variable of the formula of claim 1 - - T(l), D(l), S*(l), S(l) and N - - must apply specifically to each lamp being considered.[11] *See* Decision and Order at 23-25. TLI has not produced any evidence that <u>any</u> of the accused lamps satisfies this element of the claim.

TLI has no legitimate excuse for its failure to test the accused products to prove whether any lamp actually has a transmittance level in substantial accordance with the formula. Despite having samples of all thirty accused lamps, with respect to 27 of the 30 accused lamps, TLI produced no evidence to establish that these accused lamps comply with the formula. For the remaining three lamps, TLI purports to have analyzed each with respect to the formula. However, TLI's methodology is not reliable because TLI arbitrarily assumed values for certain

[11] According to the Court's construction, T(l) relates to transmission of electromagnetic radiation through the coating of the lamp; D(l) relates to the "spectra chosen by the maker" of the lamp; S(l), S*(l) and N relate to a measurement of electromagnetic radiation emitted by the "light-emitting element," or filament, of the lamp. *Id.*

variables in the formula, without providing any scientifically validated basis that the assumed values are correct values, to reach a pre-ordained result: TLI's goal that the accused lamps infringe the patent. Accordingly, TLI has not established factually that any accused lamp includes a coating "having a transmittance level in substantial accordance with the formula."

1. Sylvania is Entitled to Summary Judgment For 27 of the 30 Accused Lamps where TLI Produced No Values for the Variables of the Formula of Claim 1

Despite Sylvania's repeated specific requests and notwithstanding this Court's Order compelling TLI to provide the data,[12] TLI never provided Sylvania with values for T(l), D(l), S*(l), S(l) or N for 27 of the 30 accused lamps.[13] With respect to these 27 accused lamps, TLI

---

[12] Sylvania made every effort to obtain this critical information from TLI, and it is important to set forth these efforts here. Specifically, on December 22, 2005, Sylvania served on TLI its First Set of Interrogatories, including Interrogatory No. 3, which states:

> For each of the accused lamps, identify the value(s) ascertained by or for TLI (by measurement, calculation, or otherwise) for each variable and/or constant of the equation set forth in claim 1 of the '017 patent, the methodology by which such value and/or constant was ascertained, the person(s) employing such methodology, and when the value(s) were ascertained.

TLI initially refused to provide this information, claiming it was "protected by the attorney-client privilege and the work product doctrine." *See* **Ex. G**, Tailored Lighting's Response to Sylvania's First Set of Interrogatories, at 2. TLI later supplemented its response to Sylvania's Interrogatory No. 3, but continued its refusal to provide the requested data, again claiming it was "protected by the attorney-client privilege and the work product doctrine." *See* **Ex. H**, Tailored Lighting's Supplemental Response to Sylvania's First Set of Interrogatories (Nos. 3, 4 and 6), at 1. On October 10, 2007, Sylvania filed a motion to compel. **(Docket No. 109)**. By Order dated November 15, 2007, this Court compelled TLI to fully respond to Sylvania's Interrogatory No. 3. **(Docket No. 116)**. In response to that Order, TLI served on Sylvania its Second Supplemental Response to Sylvania's Interrogatory No. 3, but still failed to provide any values for 27 of the 30 accused lamps. See **Ex. I**, TLI's Second Supplemental Response to Sylvania's First Set of Interrogatories (Nos. 3 and 6), at 2-4.

[13] Specifically, TLI has not provided any values for the following accused lamps: Sylvania's SILVERSTAR product models H1ST, H3ST, H4ST, 880ST, 893ST, 9003ST, H4651ST, H4656ST, H4666ST, H6024ST, H6054ST, 9005ST, 9006ST, 9006XSST, and 9007ST and COOL BLUE product models 9003CB, H4651CB, H4656CB, H4666CB, H6024CB, H6054CB, 9004CB, 9005CB, 9005XSCB, 9006CB, 9006XSCB, and 9007CB.

has produced no credible evidence establishing that any of these accused lamps has a coating satisfying the "substantial accordance" requirement of the fourth element of claim 1, as construed by this Court. Accordingly, Sylvania is entitled to summary judgment of non-infringement for these 27 accused lamps because TLI has no credible evidence that any of these accused lamps meets all elements of claim 1.[14]

2. Sylvania is Entitled to Summary Judgment on the Remaining Three Lamps Because the Values Provided By TLI Do Not Meet the Court's Order on Claim Construction

TLI's Second Supplemental Response to Sylvania's Interrogatory No. 3 purports to provide values for T(*l*), D(*l*), S*(*l*), S(*l*) and N for two of the remaining three accused lamps (H7ST and H7CB). See **Ex. I**, at 2-4.[15] For the remaining accused lamp (9004ST), while not referenced in its response to Interrogatory No. 3, TLI also produced a document it prepared that states values for T(*l*), D(*l*), S*(*l*), S(*l*) and N. *See* **Ex. J**, TLI03098. The assumed values provided by TLI for these three accused lamps do not establish that these accused lamps include a coating having a transmittance level in substantial accordance with the formula as construed by the Court. TLI has merely shown that it can manipulate the formula to reach a preordained result: infringement.

---

[14] To sharpen the focus on TLI's evidentiary failure, TLI's expert on infringement, Dr. Mark Fairchild, did not test any of the accused lamps himself, relying solely upon the testing data provided to him by TLI. **Ex. L**, Fairchild Dep., at p. 14, ln. 24 - p. 15, ln. 5. If unsuccessful in the present motion for summary judgment, Sylvania will seek an Order from this Court to exclude Dr. Fairchild from testifying at trial because Dr. Fairchild's opinion is unreliable under Fed. R. Evid. 702, as elaborated by *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589 (1993), and its progeny.

[15] TLI produced no testing data demonstrating or even suggesting that these two lamps are representative of all 30 accused lamps with regard to the formula of claim 1. As discussed herein, for the same reasons TLI's purported data presented for the H7ST and H7CB models is unreliable and, thus, insufficient to prove infringement with respect to the these two lamps, TLI's purported data is also insufficient to prove infringement with respect to the other 28 accused lamps.

The values TLI provided for the variables N and S*(*l*) for these three lamps were not measured, as required by this Court's claim construction. Instead, TLI simply assumed values for N and S*(*l*), but provided no scientifically recognized basis supporting the validity of TLI's assumed values. By assuming values for the variables N and S*(*l*), rather than actually determining values (e.g. by measurement), TLI essentially used its conclusion of infringement to work backward through the formula of claim 1.

The Court construed the variable N to be "a percentage of electromagnetic radiation of the visible spectrum (which is from about 380 nanometers to 780 nanometers) emitted by the light emitting element in the direction of the area intended to be illuminated." At deposition, Kevin McGuire, the inventor of the '017 patent and principal of TLI, testified that he had simply assumed a value for N:

> Q. Is that value for N -- was that measured or calculated?
> **A.** That was -- that was assumed.
> Q. Assumed. What was the basis for the assumption?
> **A.** Just the nature of the material we're measuring.
> Q. What do you mean by "the material"?
> **A.** The -- the coating is an absorption coating, and the value that -- assigned to that particular type of coating is typically N equal to one or something approximating one.
> Q. Typically assigned by whom?
> **A.** Myself.
> Q. What's that?
> **A.** Myself.
> Q. Oh, okay. So for an absorption coating .99 is the value for N that you typically pick --
> **A.** Or one.
> Q. -- .99 or one? Could it have been .95?
> **A.** You could -- you could try that, I guess.

Ex. K, February 20, 2008 McGuire Dep. at p. 314, ln. 24 - p. 315, ln. 19. TLI's Expert, Dr. Fairchild, did not make an independent determination of N for any of the accused lamps. **Ex. L**, Fairchild Dep. at p. 202, ln. 19 - 20.

TLI's failure to provide a scientifically verifiable value for N for any accused product is fatal to TLI's infringement case because Mr. McGuire's analysis, on which TLI and Dr. Fairchild rely, is not based on the actual properties of the accused lamps, but, rather, on an arbitrary number Mr. McGuire assumed to make his calculations "work."[16]

Similarly, TLI did not make an independent determination of the S*(l) variable for any of the accused lamps. The Court construed S*(l) to be "the ***measurement*** of the electromagnetic radiation at the same wavelength 'l' emitted by the element not in the direction of the targeted area, but still illuminating the target" for each accused lamp (emphasis added). TLI and its expert did not measure S*(l) for any of the accused lamps. In fact, both Mr. McGuire and Dr. Fairchild testified that it is impossible to measure S*(l) for any accused lamp. **Ex. K**, February 20, 2008 McGuire Dep. at p. 261, lns. 6-16; **Ex. L**, Fairchild Dep. at p. 195, ln. 8-11. Further, Dr. Fairchild testified that he did not determine values for S(l) or S*(l) for any of the accused lamps as part of his infringement opinion. **Ex. L**, Fairchild Dep. at p. 202, ln. 9-18.[17]

---

[16] Ironically for TLI, if N is substantially equal to 1 for an absorption coating, as TLI asserts, the formula in claim 1 of the '017 patent simplifies to a formula that appears in the prior art, which then invalidates claim 1. *See* Section II. F., *infra*. Notwithstanding, the '017 patent discloses only one embodiment for the claimed envelope coating, an infrared reflective coating. *See* Col. 20, ln. 32 - col. 21, ln. 63. The concept of "absorbing" radiation instead of "reflecting" radiation is only raised at one point in the '017 patent, with respect to the envelope: "substrate 640 may be designed to absorb ultraviolet radiation which it is desired neither to transmit nor reflect." Col. 22, lns. 3-8. The '017 patent gives no guidance for absorption coatings. TLI's statements regarding absorption coatings cannot be extrapolated from the '017 patent.

[17] In discussing his failure to determine N, Dr. Fairchild stated he failed to determine both S(l) and S*(l), which prevented him from determining N. **Ex. L**, Fairchild Dep. at p. 202, ln. 9 - p. 203, ln. 2.

TLI's infringement case relies solely on Mr. McGuire assigning values for S*(l) that, when coupled with Mr. McGuire's assumption that N is 0.99, assured that TLI's measured transmission values for the accused lamps would comply with calculated transmission values using the formula.[18] Just as with TLI's asserted value for N, TLI presented no scientifically recognized methodology to justify its asserted value for S*(l). Accordingly, this Court should reject TLI's asserted values for each variable of the formula under FRE 702 as unreliable as a matter of law.

Sylvania is entitled to summary judgment as to accused lamps H7ST, H7CB and 9004ST because TLI has not provided any credible evidence to establish that these lamps have a coating with a transmittance level in substantial accordance with the formula. As a matter of law, TLI cannot establish that these accused lamps satisfy the fourth element of claim 1.

E. SYLVANIA IS ENTITLED TO SUMMARY JUDGMENT OF INVALIDITY BECAUSE THE '017 PATENT FAILS THE ENABLEMENT REQUIREMENT OF 35 U.S.C. § 112 WITH RESPECT TO THE FORMULA OF CLAIM 1

TLI failed to apply the formula to the accused lamps, and thus failed to meet its burden to establish infringement, because there simply is insufficient information in the '017 patent to

---

[18] The calculation for S*(l) used by Mr. McGuire is provided in TLI's Second Supplemental Response to Interrogatory No. 3. *See* **Ex. I**, p. 3.

$$S^*(l) = \{[(T_c(l)-T_m(l)] \times S(l)N\}/(1-N)$$

This calculation for S*(l) is inherently unreliable. It is also nowhere in the patent. First, it relies on Mr. McGuire's assumption as to the value of N and, as such, is, at best, an assumption for S*(l), but not a real value. Second, the calculation requires knowing the measured transmittance $T_m(l)$ and the calculated transmittance $T_c(l)$ prior to calculating S*(l). This calculation is nonsense because the whole point of determining the real value of S*(l) is to determine the transmittance T(l) according to the formula in claim 1. The absurdity of TLI's position becomes clear: to determine the value for S*(l) you need to know the value for T(l) which you only determine by knowing the value for S*(l). TLI knows neither value and thus does not know how to prove either value.

apply the formula to a lamp. Therefore, summary judgment of invalidity is appropriate because the '017 patent fails to meet the requirements of 35 U.S.C. § 112, ¶ 1.[19]

The failure of the patent to enable one of skill in art to make a lamp having a coating in accordance with the formula is a matter of simple mathematics. With regard to the transmission of the coating applied to the lamp envelope, there is only one equation provided in the patent (the formula of claim 1), and it contains one dependent variable, T(l), and at least two independent variables, S*(l) and N. The independent variables N and S*(l) in the formula of claim 1 must be known to calculate T(l) for any given lamp, but the '017 patent does not provide sufficient information to determine both N and S*(l). The patent does not describe a methodology for measuring N and S*(l).[20] Further, as discussed above, both Mr. McGuire and Dr. Fairchild testified that S*(l) cannot be measured (**Ex. K**, February 20, 2008 McGuire Dep. at p. 261, ln. 6-16; **Ex. L**, Fairchild Dep. at p. 195, ln. 8-11) and, according to Mr. McGuire, N is just an assumed value (**Ex. K**, February 20, 2008 McGuire Dep. at p. 314, ln. 24 - p. 315, ln. 19). Although the '017 patent contains the unsupported statement that "one may calculate the S*(l) and/or N variable in such equation," (col. 22, ln. 1-2), the patent does not provide any real information to actually make such a calculation. Moreover, one cannot use the *measured* transmittance of the coating for the accused lamp to calculate either S*(l) or N since T(l) in the formula is the "standard" against which the measured transmittance of the coating must be

[19] "Although section 282 of the Patent Act places the burden of proof on the party seeking to invalidate a patent, it does not foreclose the possibility of that party demonstrating that the patent in suit proves its own invalidity." *University of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916, 930 (Fed. Cir. 2004).

[20] In contrast to the lack of information regarding measuring N and S*(l), the patent specifically states that both "the spectral output of a filament" and "the optical output for any given lamp system with a specified coating and filament" may be measured with a conventional spectroradiometer (a device for measuring the spectral power distribution of an illuminant). See col. 20, ln. 20-21 and col. 21, ln. 64-66.

compared to determine if the transmittance of the coating is "in 'substantial accordance' with the standard defined by the formula." Decision and Order at 22-23. Since the '017 patent does not describe any way to measure S*(l) and N nor supply additional equations from which these quantities can be derived, it is a mathematical impossibility to solve for the dependent variable T(l) in the formula of Claim 1. In algebra, if given a single equation - - in this case, the formula in claim 1 - - with three unknowns - - in this case, the variables N, S*(l) and T(l) - - it is impossible to solve for a single numerical answer.

The '017 patent also contains no disclosure of even one coating that is alleged to have a transmittance level in substantial accordance with the formula recited in claim 1, and the patent never explains how the formula would enable someone to make a daylight bulb, as required under 35 U.S.C. § 112, ¶ 1. Mr. McGuire confirmed this disclosure failure during his deposition:

> 16 Q. Well, then, in February of 1996 how was somebody
> 17 going to make a daylight lamp using the information
> 18 that you provided in the 017 patent?
> 19 A. Like I said, I don't know. I said "commercially
> 20 available [software]," but I'm quite certain that the software
> 21 existed.[21]

The lack of disclosure results from the fact that neither TLI nor Mr. McGuire ever developed a lamp according to the '017 patent prior to filing the patent application that issued as the '017 patent. **Ex. K**, February 20, 2008 McGuire Dep., at p. 360, ln. 11-12. The only portion of the patent dealing with the subject of the asserted claims is Figs. 19-25 and the accompanying text at col. 17, ln. 64 through col. 23, ln. 17, which does not describe how to make a lamp having a coating in accordance with the formula. The "data" represented in Fig. 24 (purported to be "the spectral output … produced by combining filament 602, coating 620, and lamp envelope 604 in

[21] TLI never produced any documentation during discovery in this action that such software ever existed.

the precise manner described") underscores the disclosure failure because it is not actual data, but, rather, "idealized" data representing the well known standard for daylight at 5000K (D_{50}), as published in 1982 in Wyszecki, Günter and W. S. Styles, *Color Science*, 2nd ed. 1982, New York: John Wiley & Sons, at 8-10, attached hereto as **Ex. M**. The "data" is virtually identical to the spectral distribution for the international standard (CIE) D_{50} illuminant, apparently reproduced using the data presented in *Spectral Distribution of Typical Daylight as a Function of Correlated Color Temperature*, D. Judd et al., J.O.S.A. 54 (8): 1031 (1964), attached hereto as **Ex. N**.

The lack of disclosure in the '017 patent, itself, is sufficient to lead to a finding of invalidity in line with Judge Larimer's decision in *University of Rochester v. G.D. Searle & Co., Inc.*:

> An "inventor" or patentee is entitled to a patent to protect his work but only if he produces or has possession of something truly new and novel. The "invention" he claims must be sufficiently concrete so that it can be described for the world to appreciate the specific nature of the work that sets it apart from what was before. The inventor must be able to describe the item to be patented with such clarity that the reader is assured that the inventor actually has possession and knowledge of the unique composition that makes it worthy of patent protection.
>
> The patent at issue here does not do that. What the reader learns from this patent is a wish or plan or first step for obtaining a desired result. What he appreciates is that the patentee had a goal for achieving a certain end result. The reader can certainly appreciate the goal but establishing goals does not a patent make. The reader also learns that the patentee had not proceeded to do what was necessary to accomplish the desired end. In my view, such an "invention" is not really one at all. *As the Court of Appeals for the Federal Circuit stated in a case involving similar issues, an inadequate patent description that merely identifies a plan to accomplish an intended result "is an attempt to preempt the future before it has arrived." Such a patent fails to comply with the requirements of the federal statutes concerning issuance of patents and, therefore, must be held invalid.*

249 F.Supp.2d 216, 218 (W.D.N.Y 2003) (aff'd, 358 F.3d 916 (Fed. Cir. 2004) (quoting from *Fiers v. Revel*, 984 F.2d 1164, 1171 (Fed. Cir. 1993)) (emphasis added).

Sylvania is entitled to summary judgment of invalidity under 35 U.S.C. § 112, ¶ 1. As a matter of law, the '017 patent does not enable one of ordinary skill in the art to make a lamp having a coating in substantial accordance with the formula of claim 1.

F. TLI'S JUSTIFICATIONS FOR IGNORING THE FAILURES OF THE FORMULA OF CLAIM 1, IF TRUE, WOULD INVALIDATE THE '017 PATENT BECAUSE THE PRIOR ART DISCLOSES ALL OTHER ELEMENTS OF CLAIM 1

In recognition of the inherent problems with the formula in claim 1 and to justify its failure to apply the formula to the accused products, TLI and its expert argue that the formula of claim 1 can be simplified in the case of absorption filters and that all coated daylight lamps inherently meet the formula. There is no recognized scientific foundation to support these statements, just as there is no recognized scientific basis for the formula that appears in claim 1, and Dr. Fairchild's statements regarding the formula raise significant *Daubert* issues. Nevertheless, assuming, *arguendo*, for the limited purpose of this summary judgment, that TLI's belated arguments are true, then claim 1 is invalid under 35 U.S.C. § 102(b) as fully anticipated by the prior art because all elements of the claim have been disclosed operating together - - the lamp, the envelope, the substantially centrally disposed filament and the coating combined to produce daylight.

1. TLI's Statement That N = 1 For an Absorption Coating, If True, Invalidates Claim 1

TLI responded during discovery in this action, that the formula in claim 1 can be simplified when applied to the accused products, because the accused lamps use absorptive coatings. **Ex. H**, at 3. In responding to Sylvania's discovery requests, TLI stated that as a result of its testing of the accused lamps,[22] TLI determined that "[t]here was negligible or no non-

[22] TLI did not indicate which of the accused lamps were so tested.

normal incident light produced by the lamps, so that N is substantially 1." **Ex. H**, at 2. Further, TLI stated that "[t]his effect can be explained by the fact that the coating employed by Osram Sylvania and the overall shape of the envelopes produces little or no chromatic distortion." *Id.* Although TLI provides no support or basis in the '017 patent for this contention, if N is 1, the variables N and S*(l) are effectively removed from the formula.[23] The formula simplifies as follows:

$$T(l) = [D(l) - [S^*(l) \times (1-1)]] / [S(l) \times 1]$$

which then simplifies to:

$$T(l) = D(l) / S(l).$$[24]

If TLI's simplification is correct, then claim 1 is invalid based on U.S. Patent No. 1,122,066 to Brady[25] because Brady exactly disclosed this formula nearly a century ago for an absorption filter. Brady states that, "the transmission of the absorbing screen must be as the reciprocal of the ratio at each color of the intensity of the artificial light spectrum to the daylight spectrum." **Ex. O**, p. 1, lns. 60-64. TLI's expert, Dr. Fairchild, validated this disclosure by Brady, testifying: "[t]hat's really the definition of transmittance. That's what T(l) is." **Ex. L**, Fairchild Dep., at 177, ln. 21-22.

---

[23] As discussed above, TLI has not presented a scientifically recognized methodology to determine values for the variables N and S*(l) for any of the accused lamps. *See* Section II.D, *supra*.

[24] TLI acknowledges that the formula in claim 1 simplifies as such when N=1. *See* **Ex. H**, at 3. And TLI assumes that N=1 for any absorption coated lamp, stating "Starting with the established and reasonable assumption that N=1…" *Id.* at 3. While Sylvania does not agree that N=1 for any absorption coated lamp, TLI has asserted that N=1, and the effect of that assertion is to invalidate claim 1.

[25] *See* **Ex. O**. Issued in 1914, directed to "color filters or absorbing screens which operate to modify artificial light passing through them so as to produce a resultant illumination equivalent to daylight." *Id.* at p. 1, ln 9-13.

TLI has repeatedly asserted that when considering an absorption filter, like the filter disclosed in Brady and the coatings used on the accused lamps, N is substantially 1, if not equal to 1, with the result in both instances that the formula in claim 1 simplifies to the representation disclosed by Brady, according to TLI.[26] Therefore, to the extent that TLI's position as to N is correct, Brady alone invalidates claim 1.[27]

2. TLI's Statement That The Formula is Inherent to All Coated Daylight Lamps, If True, Invalidates Claim 1

TLI and its expert also argue that a bulb that produces a daylight distribution, has a tungsten filament, and a coated envelope, inherently complies with the formula in claim 1. *See* **Ex. L**, Fairchild Dep., at p. 197, ln. 7-16 and p. 229, ln. 4-19. For example, Dr. Fairchild's expert report states:

> [The equation of claim 1] is a mathematical description of the main elements of the claim … If, for example, a bulb produces a daylight distribution, has a tungsten filament, and a coated envelope, then its properties will necessarily be described by the equation in claim 1.

---

[26] In contrast to TLI's position on absorption coatings, when considering interference filters like the infrared reflective coatings disclosed in the '017 patent, TLI argues that N does not equal 1. *See* **Ex. H**, at 6. This ambiguity raises further doubts as to the validity of TLI's infringement analysis. There is no support for TLI's distinction in the '017 patent, which nowhere discusses absorption coatings. Notwithstanding, the definition of N in the '017 patent does not depend on the type of coating used. N is dependent only on the relationship between the radiant energy from the light emitting element and the lamp envelope. *See* **Ex. A**, col. 21, ln. 13-15 and col. 21, ln. 49-63. Further, this Court has construed the term "coating" in claim 1 of the '017 patent to include both reflective and absorptive coatings. Decision and Order at 18-20.

[27] Brady discloses that "the color filter or screen … can be used, for example, as the globe or bulb of an electric light." **Ex. O**, p. 1, ln. 84-89.

Ex. P, Fairchild Report, at p. 7, part (III)(B)(5).[28] However, adding a blue coating, as a filter, to a conventional lamp to produce a daylight output is well known. The patent literature extending over a century is replete with patents for daylight lamps incorporating blue coatings as filters. For example, a lamp simulating daylight using a blue coated glass filter is disclosed in U.S. Patent No. 43,581 to Gillet, issued in 1864. *See* **Ex. Q**. Gillet discloses "rendering artificial light the same color as daylight" through "a light or sky blue glass introduced before an artificial light." **Ex. Q**, at col. 1, ln. 22-28 and col. 2, ln. 18-27.

As indicated in U.S. Patent No. 1,765,242 to Reiter, issued in 1930:

> To obtain by means of electric incandescent lamps an illumination of a definite color, particularly an illumination like daylight, use has been made in many cases of colored incandescent lamps. These colored bulbs have previously been obtained either by coloring the glass of which the bulb is made, or providing the surface of the bulb with a suitably colored glaze or varnish. A disadvantage often found in incandescent lamp bulbs colored in these ways is that when not lighted their color is often disagreeable. *This is particularly true of those blue-tinted incandescent lamp bulbs with a coloring so chosen as to produce only white light and intended to give illumination like daylight.*

Ex. R at p. 1, ln. 1-16 (emphasis added). Reiter discloses an improved incandescent lamp for producing artificial daylight in which the inner surface of the envelope is provided with a colored (e.g. blue-tinted) coating sufficient to create a daylight illumination, while the outer surface of the lamp envelope is provided with a white translucent light diffusing layer sufficient to obscure the colored coating when the lamp is not lighted. *Id.* at p. 1, ln. 20-27.

U.S. Patent No. 4,844,607 to Andera et al., issued in 1989 provides yet another example, disclosing a blue filtered incandescent lamp for use in connection with a vision testing apparatus

---

[28] TLI's expert essentially concludes that the '017 patent's formula merely recites a physical law that a bulb providing a daylight distribution that contains a tungsten filament and a coated envelope will meet. That rationale reduces the '017 patent from an invention to merely a truism: if X (bulb, filament, coating, daylight distribution), then Y (formula).

to simulate daylight conditions ("in the range of approximately 5000 to 5500 degrees K."). **Ex. S** at col. 2, ln. 17-24. According to Andera, the daylight output may be accomplished by a coating, on the surface of a bulb of clear glass, housing a tungsten filament. *Id.* at col. 5, ln. 32-41.

U.S. Patent No. 4,366,407 to Walsh, issued in 1982 and assigned to Duro-Test Corporation, disclosed a lamp consisting of a tungsten filament located "at the optical center of the lamp envelope," and a coated envelope. **Ex. T** at col. 6, ln. 18-27. Walsh disclosed that an object of the Duro-Test lamp was to produce "white" light by use of a "bluish filter." *Id.* at col. 7, ln. 12-22. This Court's *Markman* Order recognized, "...white light may be generally defined as the central and generally ellipsoidal region of the [CIE's] chromaticity diagram (also known as the Kelly Chart) ... some common white color points include daylight...." Decision and Order at 9 (quoting from TLI's Claim Construction Brief **(Docket No, 90)** at 11-12[29]).

In the 1980's, between about 1981 and 1988, the Duro-Test Corporation of North Bergen, NJ sold an incandescent lamp in the United States that utilized a heat mirror coating on the lamp envelope for transmitting radiation in a selected portion of the visible range to produce a desired color and reflecting infrared thermal radiation back to the filament for increasing its temperature and thereby increasing its efficiency. *See* **Ex. U** (OS0204672-OS0204688). Testing of the Duro-Test bulb shows that it produces a daylight distribution, at least to the same extent that TLI claims the accused products produce a daylight distribution. For example, the spectral output of the Duro-Test lamp is evidenced in a 1982 memorandum published by the Lawrence Berkley Laboratories disclosing testing conducted prior to TLI's allegations against Sylvania in this case.

[29] Wherein TLI alleges it has quoted from Sylvania's U.S. Patent Application No. 2006/0187671. This text actually appears in Sylvania's U.S. Patent Application No. 2006/0066221.

See **Ex. V**. As shown in the simple comparison performed by David Gross of Sylvania, the output of the Duro-Test lamp measured by the Lawrence Berkley Laboratories is within ± 30% of the "reconstituted daylight having a correlated color temperature of 3500K" utilized by Mr. McGuire in TLI's comparison analysis to the accused lamps, at a majority of the wavelengths between 400 and 700 nm (*compare* **Ex. W** to **Ex. H**). David Gross performed an additional measurement of the output of a Duro-Test lamp, which showed the lamp output to be within ± 30% of the "reconstituted daylight having a correlated color temperature of 3500K" utilized by Mr. McGuire in TLI's comparison analysis to the accused lamps, at *all* wavelengths between 400 and 700 nm (*compare* **Ex. X** to **Ex. H**). Thus, over 10 years prior to the '017 patent's filing date, the Duro-Test lamps had all of the elements of claim 1 - - a centrally-disposed tungsten filament and a coated envelope combined to produce a daylight distribution.

To the extent that TLI contends that the formula of claim 1 is not a claim element, but merely recites the other elements of claim 1 (the lamp, the envelope, the substantially centrally disposed filament and the coating combined to produce daylight), the '017 patent is clearly invalid under 35 U.S.C. § 102 (b) as anticipated by each of numerous items in the prior art. As shown in the table attached hereto as **Ex. 2**, the patents cited above (Reiter, Andera et al., and Walsh) and the Duro-Test lamp all disclose a lamp, with an envelope, a centrally disposed filament and a coating designed to produce daylight. If TLI is correct that these elements are inherent to its formula, the prior art invalidates claim 1.

G. SUMMARY JUDGMENT IS APPROPRIATE BECAUSE ALL ASSERTED CLAIMS ARE EITHER NOT INFRINGED OR INVALID

While the discussion heretofore has focused on non-infringement and invalidity of claim 1, a finding of either non-infringement or invalidity of claim 1 should result in a finding of non-infringement or invalidity for all asserted claims. TLI has indicated that it is asserting only

claims 1, 2, 3, 4, 9 and 19 of the '017 patent. **Docket No. 90**, TLI's Memorandum In Support of Its Proposed Claim Construction, p. 6. Claims 2, 3, 4, 9 and 19 depend from and add further limitations to claim 1. *See* **Ex. A**, col. 23, ln. 57 - col. 24, ln. 2; col. 24, ln. 27-29; and col. 26, ln. 45-46.

It is axiomatic that a product that does not infringe claim 1 cannot infringe any of the other asserted claims, which are dependent on - and thus contain all the limitations of - independent claim 1. *See London v. Carson Pirie Scot & Co.*, 20 USPQ2d 1456, 1459 (Fed. Cir. 1991). Accordingly, a finding of non-infringement with respect to claim 1 necessitates a finding of non-infringement with respect to claims 2, 3, 4, 9 and 19. Similarly, if claim 1 is found to be invalid for failure to enable one of skill in the art to make a lamp with a coating in accordance with the formula, all asserted claims fail, as all asserted claims contain the limitation a "coating … in substantial accordance with the stated formula."

Further, while the validity of each claim of a patent over the prior art is to be considered independently, a finding of invalidity with respect to claim 1 should result in a finding of invalidity with respect to claims 2, 3, 4, 9 and 19 as well. As shown in the table attached hereto as **Ex. 2**, each of the patents cited above (Reiter, Andera et al., and Walsh) and the Duro-Test lamp disclose one or more of the features recited in claims 2, 3, 4, 9 and 19, in combination with the features of claim 1. In addition, the testimony of TLI's expert, also reflected in **Ex. 2**, demonstrates that the features recited in claims 2, 3, 4, 9 and 19 are inherent to the prior art cited above. *See* **Ex. P**, Fairchild Report, at 8-9. As such, claims 2, 3, 4, 9 and 19 are anticipated by the prior art.

In the alternative, such features would have been obvious to one of ordinary skill in the art to combine with the prior art coated incandescent lamps discussed above. *See KSR Intern.*

Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007) ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."). Each of the additional limitations provided in claims 2, 3, 4, 9 and 19 were well known features of incandescent lamps prior to the filing of the patent application that issued as the '017 patent and, as such, do not distinguish the claimed invention over the prior art coated incandescent lamps discussed above. For example, attached hereto as **Ex. Y** is an excerpt from Chapter 6 of *Lighting Handbook* (1993), detailing various forms of incandescent lamps known prior to the filing of the application that issued as the '017 patent.[30] As evidenced by this text, and as shown in the table attached hereto as **Ex. 3**, each of the features recited in claims 2, 3, 4, 9 and 19 was known more than one year prior to the filing of the application that issued as the '017 patent.[31]

III. CONCLUSION

Sylvania is entitled to summary judgment of non-infringement because TLI has produced no credible evidence that any of the accused lamps infringes claim 1 and, as a matter of law, TLI cannot establish that any of the accused lamps infringes any asserted claim of the '017 patent. Further, the patent does not provide sufficient information to enable the invention, and, thus, summary judgment is appropriate under 35 U.S.C. § 112, ¶ 1. Finally, to the extent that the

---

[30] This text describes "daylight lamps" as "[d]aylight lamps have bluish glass bulbs which absorb some of the red and yellow light produced by the filament. The resulting light output is of a higher correlated color temperature. This color, achieved at the expense of about 35% reduction in light output through absorption, varies between 3500 and 4000 K. This is about midway between tungsten filament light and natural daylight." *Lighting Handbook* at 183.

[31] To the extent that the disclosure in *Lighting Handbook* with respect to incandescent lamps is deemed insufficient to render claims 4 and 9 of the '017 invalid, TLI has likewise failed to provide any credible evidence to show infringement of these claims with respect to any of the accused products. TLI has produced no measurement or testing of any accused lamp to demonstrate that either the lamp envelope or the coating of the accused lamp reduces UV radiation as recited in claims 4 and 9. *See* **Ex. P**, Fairchild Report, at 8-9. Summary judgment of non-infringement with respect to these claims is appropriate.

formula recited in claim 1 can be simplified or is inherent to all coated daylight lamps, as argued by TLI to justify TLI's failure to produce any credible testing data, prior art invalidates the '017 patent, and summary judgment of invalidity of all asserted claims of the '017 patent is appropriate.

DATED: July 1, 2009

WOODS OVIATT GILMAN LLP

By: */s/ Donald R. Banowit*

Donald W. O'Brien, Jr., Esq.
Attorneys for Defendant
700 Crossroads Building
2 State Street
Rochester, NY 14614
585.987.2810
dobrien@woodsoviatt.com

and

Sterne, Kessler, Goldstein & Fox p.l.l.c.
David K.S. Cornwell (*Pro Hac Vice)*
Donald R. Banowit (*Pro Hac Vice)*
Anbar F. Khal (*Pro Hac Vice)*
1100 New York Avenue, N.W.
202.371.2600
davidc@skgf.com
dbanowit@skgf.com
akhal@skgf.com

1000350_1.doc